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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,650	10/03/2000	Pascale Escaffre	1759.011	2392

23405 7590 07/16/2003

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[REDACTED] EXAMINER

JOHNSON, EDWARD M

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1754

DATE MAILED: 07/16/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/647,650	ESCAFFRE ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 01 July 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-11, 13-21 and 24-28 is/are pending in the application.

4a) Of the above claim(s) 13-21 and 24-28 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-11 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 31 March 1999 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. .	6) <input type="checkbox"/> Other: _____ .

**DETAILED ACTION**

***Drawings***

1. The drawings are objected to because the figure is labeled "Fig. 1", which should be deleted, since there is only one figure in the Application. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the British, "characterised" and the term "said" are both used in line 2. Examiner suggests --characterized-- and --the--. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heller 5,616,532 in view of Kimura WO97/00134 (translated in US Pat. 6,228,480).

Regarding claim 1, Heller '532 discloses a photocatalyst coating (abstract) comprising a surface area of silica binder capable of bonding together (see column 3, lines 42-43) having a diameter of less than 30 nm (see column 6, lines 5-7), wherein the photocatalyst-binder composition contains at least 10% binder (see column 10, lines 13-15), wherein the binder is formed of silicone, porous alumina or silica, boron oxide, and mixtures thereof (see column 3, lines 40-43 and column 6, lines 11-13).

Heller fails to disclose silica particles having a surface area greater than 80 m<sup>2</sup>/g.

Kimura '480 discloses silica of 180 m<sup>2</sup>/g.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the silica of Kimura in the photocatalyst of Heller because Kimura discloses his silica for use in a photocatalyst material (title, column 19, line 19) for improved adhesive property and durability (see column 22, lines 30-35) and Heller discloses photocatalyst surface areas preferably greater than about 100 m<sup>2</sup>/g (see column 8, lines 47-50).

Regarding claim 2, Heller '532 discloses dispersion in water (see column 10, lines 27-30).

Regarding claim 3, Heller '532 discloses anatase TiO<sub>2</sub> (see column 9, lines 5-6).

Regarding claim 4, Heller '532 discloses 1-50 and 1-10 nm (see column 8, lines 42-46).

Regarding claims 5-6, Heller '532 discloses 10-90% of binder and 10-90% of photocatalyst (see column 10, lines 20-22).

Regarding claim 7, Kimura '480 discloses combination with zeolite to test adhesive property of the composition (see column 16, lines 20-36).

Regarding claim 8, Heller '532 discloses oxidizable carbon (see column 8, lines 1-3).

Regarding claims 9-11, Heller '532 discloses combination of the photocatalyst and binder by dispersion with a mixer (see column 10, lines 41-48).

***Allowable Subject Matter***

6. Claim 7 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and also to include, at the end, the following: --wherein the zeolite contains 2% by weight silver and is present in an amount of 2-10% by weight.--.

7. The following is a statement of reasons for the indication of allowable subject matter: Although Kimura broadly discloses the addition of silver (paragraph bridging columns 14-15), it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use a 2-10% by weight zeolite containing 2% by weight silver in the photocatalytic composition of the instant claim 7.

***Response to Arguments***

8. Applicant's arguments filed 7/1/03 have been fully considered but they are not persuasive.

It is argued that Heller discloses a photocatalyst composition... claimed surface area. This is not persuasive because Heller discloses inorganic binders (see column 3, lines 40-43 and column 6, lines 11-13).

It is argued that the Office action observes... inorganic silica binder. This is not persuasive because Kimura is not considered to "teach away" from using silica to adhere the photocatalyst of Kimura's invention because Kimura discloses the use of silica -obtained by drying- (see column 19, lines 17-29). Kimura teaches this improvement over the prior art citation referenced by Applicant but obviously, to one of ordinary skill, does not teach away from silica entirely, since silica obtained by drying is specifically disclosed (see above). Further, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the silica of Kimura in the photocatalyst of Heller because Kimura discloses his silica for use in a photocatalyst material (title, column 19, line 19) for improved adhesive property and durability (see column 22, lines 30-35) and Heller discloses photocatalyst surface areas

preferably greater than about 100 m<sup>2</sup>/g (see column 8, lines 47-50).

**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ  
July 14, 2003



STANLEY S. SILVERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700